

### **REMARKS / DISCUSSION OF ISSUES**

The present amendment is submitted in response to the Office Action mailed September 15, 2009. In view of the remarks to follow and amendments above, reconsideration and allowance of this application are respectfully requested.

#### ***Status of Claims***

Claims 1-13 remain in this application. Claims 1-13 have been amended. Claim 3 has been cancelled without prejudice or disclaimer. The claims in general are amended for one or more non-statutory reasons, for example to correct one or more informalities or obvious errors, remove figure label numbers, remove unnecessary limitations, and /or replace European claim phraseology with U.S. claim language having the same meaning. The claims are not believed to be narrowed in scope and no new matter is added.

#### ***The Invention***

Prior to addressing the substantive issues it is instructive to briefly review the invention. The invention relates to a system comprising an information carrier (e.g., optical disks, smart cards) having an optical identifier, and an apparatus, wherein the apparatus prior to accessing the information carrier verifies if the optical behavior of the optical identifier is consistent with authentication information present in the information carrier. The authentication is performed by challenging the optical identifier with a set of challenges, each challenge giving rise to a corresponding response, with the authentication information being related to the corresponding responses. The challenges are performed by irradiating a beam of incident light on the optical identifier, and varying the irradiation so as to produce a large plurality of corresponding speckle patterns, i.e. responses. The corresponding responses to the challenges are detected as resultant speckle patterns on a detector and compared with the authentication information. The set of challenges can be seen as the space of challenges the apparatus is able to provide for challenging the optical identifier, and to which corresponding responses the authentication information is related. However, during an authentication phase only a subset of the set of challenges may be actually used to challenge the optical identifier.

Access to the information carrier can be made conditional to a successful authentication, in particular by encrypting user-information present in the information carrier, and thereby providing a strong copy protection scheme.

### ***Rejections Under 35 U.S.C. §101***

Claim 13 stands rejected under 35 U.S.C. §101 as being allegedly directed to non-statutory subject matter. The rejection is understood to be based on the premise that the claim recites “a computer program for carrying out the method claimed in claim 12.” The Office states that computer programs per se are non-statutory and not patent eligible. Applicant respectfully submits that claim 13 as amended is now directed to statutory subject matter and requests reconsideration and removal of the rejection under 35 U.S.C. § 101.

### ***Claim Rejections under 35 USC 102***

In the Office Action, Claims 1–5, and 9-13 stand rejected under 35 U.S.C. §102(b) as being anticipated by WO 02/50790 (“Farrall”). Claim 3 has been cancelled without prejudice or disclaimer. Applicants respectfully traverse the remainder of the rejections.

#### ***Claims 1-5 and 9-13 are allowable***

Independent Claim 1 has been amended herein to better define Applicant’s invention over Farrall. Claim 3 is herewith cancelled, without prejudice, and claim 1 has been amended to incorporate the subject matter of now-cancelled claim 3. It is respectfully submitted that independent Claim 1, as herewith amended, now recites limitations and/or features which are not disclosed by Farrall. Therefore, the cited portions of Farrall do not anticipate claim 1, because the cited portions of Farrall do not teach every element of claim 1. For example, the cited portions of Farrall do not disclose or suggest, ***a light source for providing a set of challenges to the optical identifier giving rise to a corresponding set of responses, when the information carrier is present in the apparatus, the challenge being generated by a light beam incident on the optical identifier, a detector for detecting the corresponding set of responses to the set of challenges as different speckle patterns produced by the optical identifier upon being challenged with the light beam, a reading unit for reading the authentication information, and a verification unit for comparing the corresponding set of responses with the authentication information, the authentication information being related to the***

*responses*”, as recited in claim 1 [Emphasis Added]. In contrast to claim 1, it is respectfully submitted that the cited portions of Farrall do not disclose an apparatus including a light source for providing a **set of challenges**, a detector for **detecting the corresponding set of responses to the set of challenges** as different speckle patterns produced by the optical identifier upon being challenged with the light beam and a verification unit for comparing the **corresponding set of responses** with the authentication information, as in claim 1. In the Office Action, the Examiner, with regard to the rejection of claim 3, the subject matter of which has been incorporated into independent claim 1, directs the Applicant’s attention to pg. 44-48 of Farrall for allegedly teaching that the apparatus is able to provide a set of challenges (i.e., multiple means of irradiating the optical identifier, or tag, including, but not limited to, illumination at multiple angles, simultaneous illumination, the use of mirrors, the use of prisms, the use of lenses, optical fibers to filter the light or scanning with different wavelengths of light. The Examiner asserts that these means challenge the optical identifier, or tag, and any combination from these means can comprise a set of challenges, the challenges giving rise to corresponding responses. The Examiner further directs the Applicant’s attention to pg.45, item aa and pg. 46, item hh, for allegedly teaching detecting the corresponding responses. Farrall discloses at pgs. 45 and 46, a plurality of photo detectors which detect the light after interaction with the optical identifier, or tag. Upon a close review of Farrall, Applicant respectfully submits that Farrall does not teach an apparatus including a light source for **providing a set of challenges**, a detector for **detecting the corresponding set of responses to the set of challenges** as different speckle patterns produced by the optical identifier upon being challenged with the light beam and a verification unit for **comparing the corresponding set of responses** with the authentication information, as in claim 1. Instead, Farrall merely teaches that the tag may be illuminated or irradiated in any number of ways, as recited above. There is no teaching or suggestion that the various ways and means recited for illuminating or irradiating the tag are simultaneously used as a set of challenges as in claim 1. Instead, Farrall teaches a single illumination to record a single image. Farrall teaches at page 47, towards the bottom of the page, “To activate the system, the tag area is presented to the reader by the supplier, etc., **the tag area is illuminated and an image is recorded**. While Farrall may enumerate multiple techniques for producing the image, only one technique is chosen per application for generating a light beam and recording the resultant single image. Farrall consistently uses the term “image” in the singular. For example, Farrall

Atty. Docket No. FR030012 [MS-373]

teaches at page 48 that **the image** is a pixel-by-pixel (x-y) array of intensities (grey scale) or colours and brightnesses. Farrall teaches at the bottom of page 48, "The degree of matching between the encrypted co-ordinates and the ones that agree in **the image** recorded at the point of use decides on pass/fail."

Therefore, the cited portions of the above reference fail to disclose or suggest at least one element of claim 1. Hence, claim 1 is allowable.

Claims 2 and 4-5 depend from claim 1, and are therefore allowable at least by virtue of their dependence from allowable claim 1.

Independent Claims 9, 11, 12 and 13 recite similar subject matter as Independent Claim 1 and therefore contains the limitations of Claim 1. Hence, for at least the same reasons given for Claim 1, Claims 9, 11, 12 and 13 are believed to recite statutory subject matter under 35 USC 102(b).

Claim 10 depends from independent Claim 9, which Applicants have shown to be allowable. Accordingly, claim 9 is also allowable, at least by virtue of its respective dependency from claim 10.

**Claims 6-7 are allowable**

In the Office Action, Claims 6-7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Farrall in view of U.S. Patent No. 7,121,465 ("Rignell"). Applicants respectfully traverse the rejections.

As explained above, the cited portions of Farrall do not disclose or suggest each and every element of claim 1 from which claims 6-7 depend. Rignell does not disclose each of the elements of claim 1 that are not disclosed by Farrall.

Thus, the cited portions of Farrall and Rignell, individually or in combination, do not disclose or suggest each and every element of claim 1. Hence claim 1 is allowable and claims 6-7 are allowable, at least by virtue of their respective dependence from claim 1.

**Claim 8 is allowable**

In the Office Action, Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Farrall in view of U.S. Patent No. 6,910,629 ("Nishigata"). Applicant respectfully traverses the rejection.

As explained above, the cited portions of Farrall do not disclose or suggest each and every element of claim 1 from which claim 8 depends. Nishigata does not disclose each of the elements of claim 1 that are not disclosed by Farrall. Nishigata is merely cited by the Office for disclosing a measuring time elapsing between challenging the optical identifier and detecting the speckle pattern.

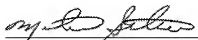
Thus, the cited portions of Farrall and Nishigata, individually or in combination, do not disclose or suggest each and every element of claim 1. Hence claim 1 is allowable and claim 8 is allowable, at least by virtue of its respective dependence from claim 1.

**Conclusion**

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-2 and 4-13 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mike Belk, Esq., Intellectual Property Counsel, Philips Electronics North America, at 914-945-6000.

Respectfully submitted,



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